

Components of Corn Herbicide Premixes (Janesville, WI 2023)

Trial Information

Trial Sponsor(s): BASF

Objective: Compare residual control of ***Sustain** and active ingredient (ai) components to Acuron and Resicore XL and their ai components

Crop: Corn

Variety: DKC50-87 RIB

Weed species (pressure): giant ragweed (high-very high)

Herbicide Application(s): PRE – 5/4

For the full report see trial #23-ROK-CN06 in the [2023 Wisconsin Weed Science Research Report](#)

***Sustain** is a new corn herbicide pre-mix, developed by BASF, containing encapsulated saflufenacil (Sharpen) and pyroxasulfone (Zidua). As of publication, EPA registration is still pending but is expected in 2024.



Cropping Systems Weed Science
UNIVERSITY OF WISCONSIN-MADISON

BASF

We create chemistry

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Trt #	Herbicide (rate acre ⁻¹)	Giant Ragweed (%)					
		21 DAT	27 DAT	35 DAT	42 DAT	54 DAT	
1	Untreated Check	0	0	0	0	0	
One-Pass – PRE (5/4)							
4	Surtain (14 fl oz)	67	66	56	23	15	
2	Sharpen (3.05 fl oz)	81	86	79	66	43	
3	Zidua SC (3.33 fl oz)	20	21	18	12	5	
7	Surtain (17 fl oz)	69	75	65	36	23	
5	Sharpen (3.71 fl oz)	88	89	83	71	63	
6	Zidua SC (4.05 fl oz)	27	16	13	8	8	
8	Resicore (1.25 qt)	58	72	58	31	14	
9	Callisto (3 fl oz)	33	65	52	24	13	
10	Surpass NXT (16 fl oz)	30	16	15	7	6	
11	Stinger (2.5 fl oz)	21	38	33	15	8	
12	Acuron (1.5 qt)	68	81	75	58	46	
13	Dual II Magnum (13.45 fl oz)	29	24	19	11	5	
14	atrazine 4L (0.75 pt)	32	18	18	8	4	
LSD ($\alpha=0.10$)		19	13	13	12	14	
p value		<0.001	<0.001	<0.001	<0.001	<0.001	

^aVisual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

Components of Corn Herbicide Premixes (Janesville, WI 2023)

Plot pictures taken on 5/25
21 days after the PRE application

The number in the upper right-hand corner is the average %
giant ragweed control of 4 replications

21 days after PRE (5/25)

Untreated Check

0%



3

21 days after PRE (5/25)

PRE: 14 fl oz Surtain

67%



2

21 days after PRE (5/25)

PRE: 3.05 fl oz Sharpen

81%



**21 days after PRE (5/25)
PRE: 3.33 fl oz Zidua SC**

20%



21 days after PRE (5/25)

PRE: 17 fl oz Surtain

69%



21 days after PRE (5/25)

PRE: 3.71 fl oz Sharpen

88%



**21 days after PRE (5/25)
PRE: 4.05 fl oz Zidua SC**

27%



**21 days after PRE (5/25)
PRE: 1.25 qt Resicore XL**

58%



21 days after PRE (5/25)

PRE: 3 fl oz Callisto

33%



**21 days after PRE (5/25)
PRE: 16 fl oz Surpass NXT**

30%



**21 days after PRE (5/25)
PRE: 2.5 fl oz Stinger**

21%



21 days after PRE (5/25)

PRE: 1.5 qt Acuron

68%



**21 days after PRE (5/25)
PRE: 13.45 fl oz Dual II Magnum**

29%



**21 days after PRE (5/25)
PRE: 0.75 pt atrazine 4L**

32%



Components of Corn Herbicide Premixes (Janesville, WI 2023)

Plot pictures taken on 5/31
27 days after the PRE application

The number in the upper right-hand corner is the average %
giant ragweed control of 4 replications

27 days after PRE (5/31)

Untreated Check

0%



27 days after PRE (5/31)

PRE: 14 fl oz Surtain

66%



**27 days after PRE (5/31)
PRE: 3.05 fl oz Sharpen**

86%



**27 days after PRE (5/31)
PRE: 3.33 fl oz Zidua SC**

21%



27 days after PRE (5/31)

PRE: 17 fl oz Surtain

75%



27 days after PRE (5/31)
PRE: 3.71 fl oz Sharpen

89%



27 days after PRE (5/31)
PRE: 4.05 fl oz Zidua SC

16%



**27 days after PRE (5/31)
PRE: 1.25 qt Resicore XL**

72%



27 days after PRE (5/31)

PRE: 3 fl oz Callisto

65%



**27 days after PRE (5/31)
PRE: 16 fl oz Surpass NXT**

16%



**27 days after PRE (5/31)
PRE: 2.5 fl oz Stinger**

38%



27 days after PRE (5/31)

PRE: 1.5 qt Acuron

81%



**27 days after PRE (5/31)
PRE: 13.45 fl oz Dual II Magnum**

24%



27 days after PRE (5/31)
PRE: 0.75 pt atrazine 4L

18%



Components of Corn Herbicide Premixes (Janesville, WI 2023)

Plot pictures taken on 6/8
35 days after the PRE application

The number in the upper right-hand corner is the average %
giant ragweed control of 4 replications

35 days after PRE (6/8)

Untreated Check

0%



35 days after PRE (6/8)
PRE: 14 fl oz Surtain

56%



35 days after PRE (6/8)
PRE: 3.05 fl oz Sharpen

79%



35 days after PRE (6/8)
PRE: 3.33 fl oz Zidua SC

18%



**35 days after PRE (6/8)
PRE: 17 fl oz Surtain**

65%



35 days after PRE (6/8)
PRE: 3.71 fl oz Sharpen

83%



35 days after PRE (6/8)
PRE: 4.05 fl oz Zidua SC

13%



35 days after PRE (6/8)
PRE: 1.25 qt Resicore XL

58%



35 days after PRE (6/8)
PRE: 3 fl oz Callisto

52%



**35 days after PRE (6/8)
PRE: 16 fl oz Surpass NXT**

15%



35 days after PRE (6/8)
PRE: 2.5 fl oz Stinger

33%



35 days after PRE (6/8)
PRE: 1.5 qt Acuron

75%



35 days after PRE (6/8)
PRE: 13.45 fl oz Dual II Magnum

19%



35 days after PRE (6/8)
PRE: 0.75 pt atrazine 4L

18%



Components of Corn Herbicide Premixes (Janesville, WI 2023)

Plot pictures taken on 6/15
42 days after the PRE application

The number in the upper right-hand corner is the average %
giant ragweed control of 4 replications

42 days after PRE (6/15)
Untreated Check

0%



42 days after PRE (6/15)

PRE: 14 fl oz Surtain

23%



**42 days after PRE (6/15)
PRE: 3.05 fl oz Sharpen**

66%



**42 days after PRE (6/15)
PRE: 3.33 fl oz Zidua SC**

12%



42 days after PRE (6/15)

PRE: 17 fl oz Surtain

36%



**42 days after PRE (6/15)
PRE: 3.71 fl oz Sharpen**

71%



**42 days after PRE (6/15)
PRE: 4.05 fl oz Zidua SC**

8%



42 days after PRE (6/15)
PRE: 1.25 qt Resicore XL

31%



42 days after PRE (6/15)

PRE: 3 fl oz Callisto

24%



**42 days after PRE (6/15)
PRE: 16 fl oz Surpass NXT**

7%



**42 days after PRE (6/15)
PRE: 2.5 fl oz Stinger**

15%



42 days after PRE (6/15)

PRE: 1.5 qt Acuron

58%



**42 days after PRE (6/15)
PRE: 13.45 fl oz Dual II Magnum**

11%



42 days after PRE (6/15)
PRE: 0.75 pt atrazine 4L

8%

